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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,761	04/02/2004	Ivan E. Sutherland	SUN-P9702	1135

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EXAMINER
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LAM, TUAN THIEU

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AKC

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,761	<b>Applicant(s)</b> SUTHERLAND ET AL.	
	<b>Examiner</b> Tuan T. Lam	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-10 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 4-6, 11-13 and 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/15/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This is a response to the amendment filed on 1/3/2005. Claims 1-6, 8-13 and 15-20 are pending.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 8 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Witt et al. (USP 5,831,462), prior art cited on the PTOL-1449. Figure 1 of Witt et al. shows an apparatus for latching and amplifying a capacitively coupled inter-chip communication signal (IN) comprising receiving an input signal (Din) on a capacitive receiver pad (input pad) from a capacitive transmitter pad (the input signal is being transmitted to the input pad of the receiver from a transmitter pad), feeding the input signal through an inverter (106) to produce an output signal (OUT), feeding the output signal through a weakened inverter (108) to produce a feedback signal (signal at node A), feeding the feedback signal back into the input of the inverter so as to form a latch for the input signal between the inverter and the weakened inverter, wherein the weakened inverter is biased to produce the feedback signal that swing between a high bias voltage (VCC) and a low bias voltage (ground), wherein the VCC (3.3v or 5v) is higher than the switching threshold of the inverter (the threshold voltage of the transistors of the inverter 106 is normally at 0.7v), and the low bias voltage (Vss) is less than the switching threshold of the inverter, adjusting a RC time constant for the feedback signal (is achieved by the resistor in the

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feedback path) so that the time constant for the feedback signal is significantly larger than the time constant for the transmitted signal from the capacitive transmitter pad (the parasitic time constant of the capacitive transmitter is normally smaller compared to the RC time constant consisting the resistor in the feedback path), since, Witt et al.'s reference having a similar structure as claimed therefore, it is capable of providing the feedback signal causes the input signal to reside within a narrow voltage range near the switching threshold of the inverter, thereby making the inverter sensitive to small transitions in the input signal received on the capacitive receiver pad as called for in claims 1, 8 and 15.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-3, 9-10 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witt et al. (USP 5,831,462) in view of Wadsworth (WO 01/56084A1), prior art cited on the PTOL-1449. Figure 1 of Witt et al. discloses all the limitations of claim 1 as noted above except an inverter for amplifying the output of the inverter as called for in claims 2, 9 and 16.

Wadsworth's figure 1 shows inverter (110) to amplifying output of an inverter to preserve the integrity of a signal. Therefore, it would have been obvious to person skilled in the art at the time the invention was made to include an output inverter for amplifying the output of the inverter for the purpose of protecting the integrity of the data thus prevent erroneous operation.

Regarding claims 3, 10 and 17, the high voltage VCC and the low bias (VSS) are generated by voltage generators commonly known in the art.

*Allowable Subject Matter*

4. Claims 4-6, 11-13 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam  
Primary Examiner  
Art Unit 2816

02/17/2005